

Position Paper 'Water'

Executive Summary

Water stress is a global issue:

- Climate change is forcing drought mitigation measures and flood management strategies.
- In many countries infrastructure is aging and failing.
- Agriculture, domestic and industrial sectors are impacted by increasing demand and limited supply.
- Water management domains are often fragmented with conflicting interests of stakeholders.
- Worldwide energy needs drive water needs and vice versa.
- Regulatory frameworks force decisions.
- (Initiatives for) change in the water sector increasingly come from outside the sector, through 'outside the waterbox thinking'.
- 'Outside the waterbox thinking' is needed to improve the process of change. ICT plays a dominant role in this process!

Water is quickly rising on the agendas of leaders worldwide in various sectors: government, cities, the oil & gas industry, energy and water utilities, transport, insurance, and consumer goods. Integration & harmonization of existing and new IT infrastructures, applications, models, sensors and data is needed to help address the challenges facing us. *'One barrier to better management of water resources is simply lack of data — where the water is, where it's going, how much is being used and for what purposes, how much might be saved by doing things differently. In this way, the water problem is largely an information problem. The information we can assemble has a huge bearing on how we cope with a world at peak water¹.'*

Objective of this Water Track

- Raise awareness of business and public leaders regarding the impact and dependencies of changing water conditions on their responsibilities, operations and future.
- To inspire by showcasing international best practices
- Facilitate the discussion for breakthrough actions, projects and solutions
- To attract the interest of, and involve the younger generation in water problems. More specifically, to encourage the younger generation to use IT solutions for water problems

Scope of track Water & IT

The following four subjects will be the main focus during WCIT. Within these four lines, different topics will be addressed:

1. Safety & security, delta and city development
2. Water footprint & virtual water
3. Food, energy & (waste)water
4. Millenium Development Goals & Water

The overall theme 'Challenges of Change' and its framework (Day I: Inspiration, Day II: Innovation and Day III: Transformation) will act as a guiding principle for the program.

An Introduction to Water & IT

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¹ **Source:** Wired Magazine, 'Peak Water: Aquifers and Rivers Are Running Dry. How Three Regions Are Coping', Matthew Power, April 21st, 2008

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Target audience (C and C-1)

- ICT sector
- Water sector (consultants, companies, water boards, science experts)
- Government: ministries, local / regional governments responsible for water management, environment, spatial development, crisis response (cities for the future)
- Industry: oil/gas/chemical industry, insurance industry, food & beverage industry, consumer goods
- Energy & water utilities
- NGOs
- Venture capitalists

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Solutions

- How can I effectively defend my city against the water?
- How can I reduce the amount of water that uselessly flows away when I water my land?
- How can I reduce the amount of water needed to make one kilo of coffee?
- How can we make sure that the water we drink is clean?

State of the art solutions will be provided by Water and IT companies. Governments and multinationals will find inspiration to tackle major (future) problems. Within the four different lines listed above, the following topics have been selected as topics of special interest

- Oceans, climate and weather modelling & forecasting
- Monitoring & sensing
- Serious gaming
- Automation of lab environments
- Architecture and standardizing
- (Low cost) early flood warning systems
- Asset management
- Mobile telephones & water (conductivity)
- Water stewardship

European Component

In the 'Declaration of Amsterdam' we will state that we have the ambition to start and realize several pilots to address certain topics in the EU water vision and Aquawareness program.

Conclusion

Water will be one of the most important topics of the next 100 years, in all possible ways: water and safety, water and sanitation, water and health etc. IT makes innovation possible in the water sector. At WCIT, a big step forward will be made by bringing together captains of industry from both the water and the IT world, in order to create new solutions for (future) social problems.